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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/045,052 | 01/15/2002 | Warren Carl Couvillion JR. | 109208 | 2931 |

25944 7590 06/13/2006

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| EXAMINER |
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RICHMAN, GLENN E

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| ART UNIT | PAPER NUMBER |
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3764

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/045,052

Applicant(s)

COUVILLION ET AL.

Examiner

Glenn Richman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 7, 8, 10, 12, 18, 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Openiano.

Openiano discloses a pressure-sensing mat (14) including a base layer (142), a plurality of pressure sensing elements formed over the base layer (fig. 9), and a top layer formed over the plurality of pressure-sensing elements (141), wherein the plurality of pressure sensing elements output signals indicative of pressure applied to the top layer (col. 7, lines 37-64); the plurality of pressure- sensing elements make up a grid (fig. 9), the base layer comprises a semi-rigid material (181), a virtual reality system comprising the locomotion interface of claim 1 (fig. 1), a locomotion interface that outputs signals indicative of a user's position in real space (abstract), a virtual reality processor that uses the signals output by the locomotion interface to produce an output indicative of the user's position in the virtual space corresponding to the user's position and movement in the real space (abstract); and a display that uses the output from the virtual reality processor to produce an image of the virtual space (abstract).

The method claims 18-20 are inherent in the corresponding apparatus claims and are rejected for the reasons above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Openiano in view of O'Heir.

Openiano does not disclose the plurality of pressure- sensing elements comprise force sensitive resistors.

O'Heir discloses a plurality of pressure- sensing elements comprise force sensitive resistors (col. 4, lines 34-41).

It would have been obvious to use O'Heir's comprise force sensitive resistors, with Openiano, as it is well known to use force sensitive resistors, as taught by O'Heir, for sensing a user in a virtual reality system.

Claims 5, 6, 13, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Openiano.

Openiano does not disclose the base is in the shape of a spheroid, however it would have been an obvious design choice, given no unexpected results.

As for the various species of claims 9 and 10, they are obvious design choices for the materials, given no unexpected results.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Openiano in view of Carmein (5,562,572).

Openiano does not disclose a head mounted display.

Carmein discloses a head mounted display (21)

It would have been obvious to use Carmein's head mounted display with Morifuji's display, as it is well known as taught by Carmein, to use a head mounted display in a VR system, for displaying the virtual position of a user.

Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Openiano in view of Faughn

Openiano does not disclose a pattern generator.

Faughn discloses a pattern generator that uses the signals output from the locomotion interface to generate a plurality of corresponding patterns (col. 5, lines 36 – et seq.).

It would have been obvious to use Faughn's pattern generator with Openiano's device, as it is well known in the art taught by Faughn, for generating a plurality of corresponding patterns.

Faughn further discloses a motion identifier that uses the plurality of patterns generated by the pattern generator to identify a corresponding plurality of user positions and user movements (col. 5, lines 36 – et seq.); and a virtual environment rendered that uses the identified user positions and movements to generate a virtual space such that the user can effect, and be effected by, the virtual space (col. 5, lines 36 – et seq.), the plurality of positions identified by the motion identifier comprise at least one of a prone

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user position, a crawling user position, and a standing user position (col. 5, lines 36 – et seq.), at least one of a backward user motion, a sideways user motion, a forward user motion, and a diagonal user motion (col. 5, lines 36 – et seq.).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn Richman whose telephone number is 571-272-4981. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on 571-272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Glenn Richman
Primary Examiner
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